- OTTAWAY, J.R. 1973. Some effects of temperature, desiccation, and light on the intertidal anemone Actinia tenebrosa Farquhar (cnidaria: anthozoa) Aust. J. Mar. Freshwat. Res. 24: 103-26.
- OTTAWAY, J.R. 1978. Population ecology of the intertidal anemone Actinia tenebrosa. I. Pedal locomotion and intraspecific aggression. Aust. J. Mar. Freshwat. Res. 29: 787-802.
- OTTAWAY, J.R. 1979a. Population ecology of the intertidal anemone Actinia tenebrosa. II. Geographical distribution, synonomy, reproductive cycle and fecundity. Aust. J. Zool. 27: 273-290.
- OTTAWAY, J.R. 1979b. Population ecology of the intertidal anemone Actinia tenebrose. III. Dynamics and environmental factors. Aust. J. Mar. Freshwat. Res. 30: 41-62.
- OTTAWAY, J.R. 1980. Population ecology of the intertidal anemone Actinia tenebrosa. IV. Growth rates and longevities. Aust. J. Mar. Freshwat. Res. 31: 385-395.
- UNDERWOOD, A.J. 1979. The ecology of intertidal gastropods. Adv. Mar. Biol. 16: 111-210.

THE SURVIVAL, HABITAT AND A NEW RECORD FOR THE SCORPION CERCOPHONIUS SQUAMA (SCORPIONIDA: BOTHRIURIDAE)

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The scorpion, Cercophonius squama (Gervais), is generally distributed in the cooler, wetter areas of southern Australia, but is also found in some of the warmer, drier parts of north-western Victoria, Western Australia and at Alice Springs in the Northern Territory (localities listed in Koch, 1977).

In July 1981 I found two specimens of *C. squame* under rocks at Maggie Springs, about 50 metres from the base of the south side of Ayers Rock. One scorpion was eating a centipede and the other an ant. The area was covered with sparse bloodwoods (*Eucalyptus terminalis*) over dense perennial grass (*Themeda avenacea*). Both scorpions were found on the edge of this vegetation where the grass clumps were more scattered and where there were a number of rocks between the grass clumps.

Koch (1977) considers that the ancestor species of *C. squama* may have been widespread throughout Australia in the early tertiary, and that changes since then have resulted in *Cercophonius* contracting its distribution southwards, leaving relict populations in the Northern Territory and outlier populations in some of the more arid areas of Western Australia, South Australia and Victoria.

The presence of a predominately temperate species in central Australia and other semi-arid areas may appear anomalous. However, if the microhabitat and behaviour of the species is considered, its presence in these areas is understandable.

Maggie Springs is a permanent spring, situated on the steep south face of Ayers Rock. Although no climatic data are available for the area, it is reasonable to assume that the temperature will be considerably lower and the soil moisture higher than in other locations in the area. Assuming that the microclimate is milder, the burrowing habit of the species will further enhance its ability to survive in an otherwise inhospitable area. Specimens of *C. squama* from the A.C.T. Albany in W.A. and Ayers Rock have been observed to burrow in captivity, where they dig a shallow burrow each night, sometimes closing the entrance to the burrow, and digging a new exit the following night. After feeding, some individuals have remained in their sealed burrows for up to four months. Clearly, this ability would enable the species to sit out the harsh summer months.

The survival of *C.* squama in semi-arid regions can be attributed to the presence of a suitable microhabitat, its ability to burrow and the general ability of scorpions to survive for months without food.

REFERENCE

KOCH, L.E. 1977. The taxonomy, geographic distribution and evolutionary radiation of Australo-Papuan scorpions. Rec. West. Aust. Mus. 5: 83-367.